

What is claim d is:

1. A method of transmitting control signals for uplink transmission of packet data, comprising:

transmitting control signal data over a control channel shared by a plurality of users, the control channel including fields identifiable by different ones of the users, each field including control signal data for a specified user for uplink transmission of packet data.

2. The method of claim 1, further comprising:

assigning each user a particular field in the control channel, in advance of transmitting the control channel.

3. The method of claim 2, wherein the assigning step includes assigning each user a particular field with a given channelization code during a call setup procedure with the user.

4. The method of claim 1, wherein the control signal data in each field includes acknowledgment/negative acknowledgment of a packet transmitted by a user and an indicator related to a transmit rate at which the user is to transmit in the uplink.

5. The method of claim 1, wherein the control signal data in each field includes a first indicator specifying one or an acknowledgment or negative acknowledgment of a packet transmitted by a user.

6. The method of claim 5, wherein the control signal data in each field includes a second indicator related to a maximum transmit rate at which the user is to transmit in the uplink.

7. The method of claim 6, wherein a user adjusts transmit rate or maintains transmit rate in the uplink based on values of the first indicator and the second indicator.
8. The method of claim 1, wherein the number of users supported by the transmitted control channel is based on one or more of a network signal-to-noise ratio value, an effective coding rate for the channel, and bit size of each field.
9. The method of claim 6, wherein the number of users supported by the transmitted control channel is based on a bit size of the second indicator in each field.
10. The method of claim 6, wherein the first and second indicators are 1-bit values.
11. The method of claim 6, wherein the first and second indicators are N-bit values, N representing a positive integer greater than 1.
12. The method of claim 6, wherein one of the first indicator and second indicator is an M-bit value and the other of the first indicator and second indicator is an N-bit value, N and M being different positive integers.
13. The method of claim 1, wherein each field is individually power controlled based on an uplink power control command by the user specified by the field.
14. A method for uplink transmission of packet data, comprising:
 - decoding a field received over a control channel that is shared by a plurality of users, the shared control channel having a plurality of fields, each field including control signal data for a specified one of the plurality of users; and
 - the specified user transmitting packet data in the uplink in accordance with the decoded control signal data.

15. The method of claim 14, wherein each user is assigned a particular field in the shared control channel by a network serving the users, in advance of receiving the shared control channel.

16. The method of claim 15, wherein each user is assigned a particular field with a given channelization code during a call setup procedure with the network.

17. The method of claim 14, wherein each user is assigned a particular field in the shared control channel by a base station serving the user, in advance of receiving the shared control channel, the assigned field adapted to be modified by the serving base station.

18. The method of claim 14, wherein the control signal data in each field includes one of an acknowledgment/negative acknowledgment of a packet previously transmitted by the specified user and an indicator related to a transmit rate at which the specified user is to transmit in the uplink.

19. The method of claim 14, wherein the number of users supported by the shared control channel is based on one or more of a network signal-to-noise ratio value, an effective coding rate for the shared control channel, and bit size of each field in the shared control channel.

20. The method of claim 14, wherein the control signal data in each field includes a first indicator specifying one or an acknowledgment or negative acknowledgment to a packet transmitted by the specified user.

21. The method of claim 20, wherein the control signal data in each field includes a second indicator related to a maximum transmit rate at which the specified user is to transmit in the uplink.

22. The method of claim 21, wherein the specified user adjusts transmit rate or maintains transmit rate for uplink transmission based on values of the first indicator and the second indicator.

23. The method of claim 21, wherein the number of users supported by the shared control channel is based on bit size of the second indicator in each field.

24. The method of claim 14, wherein each field is individually power controlled based on an uplink power control command by the user specified by the field.